BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images, please do not report the images to the Image Problem Mailbox.

OPIC
OFFICE DE LA PROPRIÉTÉ INTELLECTUELLE DU CANADA

CIPO
CANADIAN INTELLECTUAL PROPERTY OFFICE

(12)(19)(CA) **Demande-Application**

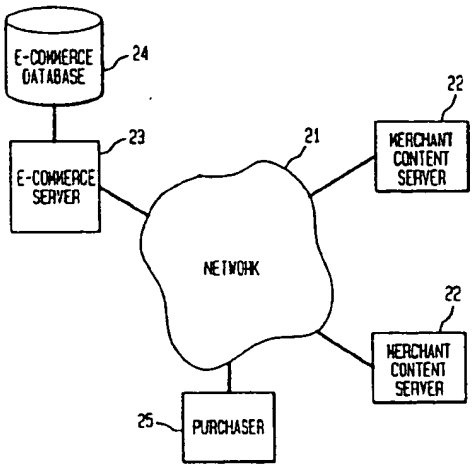
(21)(A1) **2,222,229**
(22) 1997/11/25
(43) 1998/07/15

(72) GREGORY, James McKanna, US
(71) AT&T CORP., US

(51) Int.Cl.[6] G06F 17/60
(30) 1997/01/15 (783,181) US

(54) **SYSTEME ELECTRONIQUE REPARTI D'EXECUTION DE TRANSACTIONS COMMERCIALES ET METHODE UTILISEE PAR CE SYSTEME**

(54) **SYSTEM AND METHOD FOR DISTRIBUTED CONTENT ELECTRONIC COMMERCE**



(57) L'invention est un système électronique réparti d'exécution de transactions commerciales sur un réseau qui sépare la fonctionnalité transactionnelle des informations consignées par les marchands. La fonctionnalité en question est assurée par un serveur commercial contenant une base de données commerciales. Ce serveur stocke dans la base de données commerciales les profils des marchands et des acheteurs et des résumés des informations consignées par les marchands. Le client explore la base de données au moyen du serveur commercial en y cherchant des produits et des informations et reçoit des informations

(57) Distributed electronic commerce is conducted over a network by substantially separating transaction functionality from merchant content. Electronic commerce transaction functionality is provided by a commerce server having a commerce database. The commerce server stores merchant and purchaser profile data and merchant content summaries on the commerce database. The purchaser browses and searches for product and merchant information using the commerce server, and is provided with more detailed information stored at a separate merchant content server system. The purchaser selects products to purchase, and a purchase

SYSTEM AND METHOD FOR DISTRIBUTED CONTENT ELECTRONIC COMMERCE

Abstract of the Invention

Distributed electronic commerce is conducted over a network by substantially separating transaction functionality from merchant content. Electronic commerce transaction functionality is provided by a commerce server having a commerce database. The commerce server stores merchant and purchaser profile data and merchant content summaries on the commerce database. The purchaser browses and searches for product and merchant information using the commerce server, and is provided with more detailed information stored at a separate merchant content server system. The purchaser selects products to purchase, and a purchase order is sent to the commerce server. The commerce server initiates the settlement of accounts between the merchant and purchaser, and initiates order fulfillment for the selected product. The separation of transaction functionality and merchant content onto separate servers under the control of a commerce service provider and a merchant, respectively, provides a more efficient and effective way of carrying out electronic commerce over a network.

SYSTEM AND METHOD FOR DISTRIBUTED CONTENT ELECTRONIC COMMERCE

Field of the Invention

This invention relates to carrying out electronic commerce on a network, and particularly to an electronic commerce server and database that provide transaction functionality and content summaries to purchasers, and which refer purchasers to merchant content servers that provide more extensive information on products for sale on the network.

Background of the Invention

Electronic commerce is traditionally carried out over a network using a commerce server networked with purchasers and merchants. As shown in FIG 1, such a traditional electronic commerce server system 11 provides substantially all of the functionality needed to carry out buying and selling on a network 12. This includes storing product information provided by merchants 13, accepting requests for information from prospective purchasers 14, and accepting and processing orders.

The number of commerce servers offered by different server vendors is limited. For example, each such server

is configured and programmed differently. Thus, the traditional commerce server 11 is compl x, expensive, and often requires substantial expertise to configure and operate. These disadvantages allow only the largest merchants to own and operate their own commerce servers.

Rather than operate their own commerce servers, smaller merchants typically purchase electronic commerce services provided by a commerce service provider. In this case, the provider owns and maintains the commerce server, who distributes configuration, operation and maintenance costs across the subscriber merchants, realizing an economy of scale. However, in so doing, the provider usually enforces uniform standards for appearance and methods of doing business to reduce the amount of custom programming necessary in order to economically accommodate several different merchants. Thus, each merchant being served loses a substantial amount of control over the way he conducts business over the network. This restricts the merchant's ability to express a particular personality and to do such things as develop distinctive trade dress. This places him at a competitive disadvantage in the marketplace, especially when compared to those merchants who can operate their own servers.

The service provider's expertise lies in the acquisition, operation, and maintenance of the commerce server hardware and the commerce functionality it provides to all of its merchants and purchasers. Examples of commerce functionality include taking orders and effectuating payment for any product offered by a merchant.

However, the service provider faces problems with

respect to "content" from the merchant(s). First, content falls within the expertise of the merchant, not the provider. Second, the electronic commerce service provider faces high costs in acquiring, publishing, and maintaining a database of merchant content. This problem is especially pronounced when content from many merchants is stored in a large aggregate on a commerce server, because there is no economy of scale in adding merchant content to a server. The cost of adding an additional content file to a server is not less than the cost to add a similar file previously. In fact, the burden of loading, updating, and deleting content from each additional merchant can greatly increase the complexity and administrative cost of running a server beyond that for the content of the earlier-in-time merchants. Further, a larger aggregate of merchant content on a single commerce server slows the performance of the server.

Thus, under current methods of carrying out electronic commerce, the merchant whose expertise lies in producing and managing content is faced with the choice of operating and maintaining an expensive commerce server or losing control of his marketing to a provider. The provider, whose expertise lies in the acquisition and maintenance of electronic commerce hardware and software, must shoulder the burden of acquiring, publishing and maintaining merchant content.

Summary of the Invention

A better way of conducting electronic commerce is to allocate most of the task of content acquisition and maintenance to the merchant, and allocate most of the task

of providing electronic commerce transaction functionality to the service provider. Under this regime, neither the merchant nor the provider would be burdened with tasks outside their respective areas of expertise. The present invention provides a system for carrying out electronic commerce over a network where transaction functionality is provided by a commerce server having a commerce database, while detailed merchant content is provided on separate merchant content servers.

The commerce server maintains merchant profiles in the commerce database. The profiles comprise summaries of the products offered for sale by each merchant registered with the electronic commerce service. Here, the term "product" is meant to include services. A merchant profile also includes a merchant identification number, a list of the payment vehicles accepted by the merchant; a summary of merchant policies; and a summary background of the merchant. In one embodiment, the merchant identification number is the network address of the merchant's content server.

The commerce server also maintains purchaser profiles in the commerce database that comprise purchaser identification numbers, purchaser payment data (such as credit card and bank account numbers), and billing and shipping addresses.

The commerce server provides transaction functionality that effectuates an electronic commerce transaction. An electronic commerce transaction is the process of selling and purchasing an item over a network.

A purchaser requests the commerce server to send shopping information. The purchaser browses or searches

for pr ducts on the commerce server, and data regarding products and merchants is retrieved from the commerce database. At the purchaser's request for more information on a product or merchant, the commerce server refers the purchaser to an appropriate merchant content server, which contains much more detailed information about the product and merchant than is available from the commerce database.

While browsing or searching the merchant content server, the purchaser may select one or more products for purchase. When the purchaser indicates he is ready to effectuate such a transaction, data concerning the selected product or products are sent to the commerce server. The data include information sufficient to identify the product, purchaser and selling merchant. The commerce server communicates with an external payment system to debit the purchaser's account and credit the merchant's account, effectuating the sale. The commerce server also generates a fulfillment message that ensures product delivery to the purchaser.

The commerce server also generates reports for the merchant and purchaser upon request. The reports summarize historical transaction data as requested.

Merchant content servers are simpler, easier to operate, and less expensive than the full-functioned servers traditionally used to maintain both content and transaction functionality in carrying out electronic commerce. The efficient division of functionality between the commerce server and the merchant content server thus advantageously streamlines the process of providing e-commerce services while lowering the cost thereof.

Brief Description of the Drawings

FIG 1 shows a prior art embodiment of an electronic commerce system.

FIG 2 shows an electronic commerce system in accordance with an embodiment of the present invention.

FIG 3 shows merchant content servers connected to a network in accordance with an embodiment of the present invention.

FIG 4 shows merchant content servers connected to a network in accordance with another embodiment of the present invention.

FIG 5 shows an embodiment of an electronic commerce server and an electronic commerce database in accordance with an embodiment of the present invention.

FIG 6 shows an embodiment of a merchant interface screen in accordance with an embodiment of the present invention.

FIG 7 shows an embodiment of a merchant content abstract update interface in accordance with the present invention.

FIG 8 shows an embodiment of a merchant content abstract edit interface in accordance with the present invention.

FIG 9 shows another embodiment of a merchant content abstract edit interface in accordance with the present invention.

FIG 10 shows an embodiment of a merchant content abstract edit interface that shows a list of products in the commerce database in accordance

with the present invention.

FIG 11 shows an embodiment of a purchaser interface in accordance with the present invention.

FIG 12 shows an embodiment of a merchant information screen generated in response to a purchaser query in accordance with the present invention.

FIG 13 shows an embodiment of a product information screen generated in response to a purchaser search on a merchant content server in accordance with the present invention.

Detailed Description

In accordance with the present invention, an embodiment of which is shown in FIG 2, electronic commerce is carried out over a network 21 with a purchaser 25, where content is distributed through the network on merchant content servers 22, and transaction functionality is provided by an electronic commerce server 23 having an electronic commerce database 24. Network 21 is a data network, an example of which is the Internet.

The content servers 22 are controlled by merchants, and contain detailed merchant data. This merchant data comprises information on the products offered by the merchant, including product names, manufacturers, colors, sizes, and prices. It also includes multimedia information about the product, comprising at least one type of text, audio, graphic, animation and video data. Merchant data also comprises detailed information regarding warranty, guarantee, and merchandise return information, as well as background information regarding the merchant. Merchant content data includes information

that comprises an electronic catalog of the merchant's products.

Merchant content servers are simpler, easier to operate, and less expensive than the full-functioned servers traditionally used to maintain both content and transaction functionality in carrying out electronic commerce. In one embodiment of the present invention shown in FIG 3, each merchant controls its own very simple content server 32, 33, 34 and 35, each of which is connected to the network 31. The term connected encompasses direct and indirect data connection. In other words, when A is connected to B, A may be connected to B directly (e.g., via an RS 232 cable); through a network; or through a network of networks. In another embodiment shown in FIG 4, several merchants 42, 43, 44 and 45 connected to a network 41 share a single content server 46 connected to the network. In this embodiment, the box representing merchant P 42 is a personal computer through which merchant P 42 is connected to the network 41. Merchant P 42 transfers data to and from the merchant content server 46 through the network 41, to which the merchant content server 46 is also connected. Merchants 42, 43 and 44 interact with the merchant content server 46 in the same way.

In accordance with the present invention, an electronic commerce server 23 controlled by a transaction service provider is also connected to the network 21, as shown in FIG 2. The commerce server 23 provides transaction and content searching functionality and stor s commerce server data including merchant abstract data on a commerce database 24.

Transaction functionality refers to the capability to carry out actions n eded to effectuate a purchase and sale over the network 21. For example, in one embodiment, the transaction server accepts a credit card number from a purchaser and contacts the credit card vendor to verify that the account has a sufficient line of credit to complete the purchase of a product or products having a given price. Once authorization is received, the commerce server sends messages to a banking institution that debits the purchaser's account and credits that of the merchant, effectuating a purchase. Other transaction functionality can include: arranging to have the selected product shipped; and/or other order fulfillment functions, such as implementing a customer satisfaction survey along with product delivery, and storing the results for presentation and analysis.

Commerce server data comprises summary data on the products offered by those merchants that have content servers that subscribe to the electronic commerce service. In one embodiment, this includes product numbers, product categories, sizes, colors, prices, and a link to the appropriate merchant content server where more product information can be found. Commerce server data may also include merchant profile data, including summaries of the forms of payment accepted by a merchant, merchant policies, and merchant background information. Merchant profile data is added to the commerce database when the merchant initially registers for the service, and may be updated at any time by the merchant.

Commerce server data comprises abstracts of more extensive data available at the merchant content servers.

These abstracts are generally substantially smaller in size than the data from which they are drawn on the merchant content server. For example, in one embodiment, a product abstract comprises a textual representation of a product name, product price, a one sentence description of the product, and the URL (Uniform Resource Locator, i.e., network address) of the merchant content server on which more information regarding the product may be found. The corresponding more fulsome information on the merchant content server includes the same information provided in the abstract, but further comprises a multimedia video of the product being modeled with accompanying audio, a full catalog description of the product, a description of all available sizes and colors, and shipping information. Thus, the abstract on the commerce server is a brief representation of content server data sufficient to enable the user to make an informed decision as to whether to seek additional information from the appropriate content server. This advantageously maximizes the benefits of distributed electronic commerce in accordance with the present invention.

The present invention advantageously provides a simple and uniform interface to the merchant whereby the merchant adds merchant content summary data to the commerce database 24. An embodiment of such an interface is shown in FIG 6.

In this embodiment a merchant is first identified 61 and authenticated 62 to the service, and then choose one of three possible functions adding product information 63; editing product information 64, or generating a report 65 based on historical transaction data.

If the merchant selects the add product button 63, the service presents to the merchant a screen for facilitating entry of product information. One such screen is shown in FIG 7. In the illustrated embodiment the screen presents several product information fields, including a product identification number (SKU) field 711; category 712; manufacturer 713; product name 714; list price 715; offer price 716; weight 717; size range 718; a date until which the offer is good 719; and optional keywords 720 and 721. A merchant may define his own attribute/value pairs 725 for a product, such as "Shell/Material" (e.g., "Shell/100% Cotton," or "Insulation/Material" (e.g., "Insulation/Wool.")

When the merchant is finished entering the new product data, he selects the submit button 723, and the commerce database is then updated, associating the newly submitted data with the merchant's identification number and a time stamp indicating when it was added. The collection of product information stored in the commerce database is called a merchant content abstract.

It should be noted that this input process and these interface screens are an illustrative embodiment of data entry methods of the present invention, and that any other interface or method for entering data that comport with the architecture of the present invention are valid. For example, in one embodiment, data entries are validated (e.g., checked for proper correspondence between manufacturer and product name, etc.) before the data entries update the electronic commerce server database.

In one embodiment of the present invention, the commerce server is provided with a merchant content

abstract according to the following data structure:

```
merchant_content_abstract
        merchant        /*merchant identification number*/
        SKU_number      /*product identification number*?
        category        /*product type*/
        manufacturer    /*product maker*/
        keyword         /*searchable keyword*/
        keyword         /*searchable keyword*/
        name            /*product name*/
        list_price      /*manufacturer's suggested retail
                        price*/
        weight
        size_range
        offer_price     /*price offered to purchaser*/
        good_until      /*date offer expires*/
        time_stamp      /*time loaded by merchant*/
}
```

It should be noted that size/value and weight/value are two embodiments of a general attribute/value format. Each attribute/value pair may be specified by the merchant to tailor the abstract to meet his requirements. For example, for a saw, a merchant may specify the material of which the cutting surface is made with the attribute/value pair blade/material, e.g., blade/titanium.

Generally, the URL of the merchant content server is provided to the commerce server at the time the merchant registers with the service. However, in accordance with the present invention, the merchant may advantageously specify another URL 724 (FIG 7) for a merchant content server on the abstract interface screen.

A further advantage of the present invention is that any server having content may register with the commerce server without having to be designed specifically to take advantage of the service. Besides registering with the

service, it is only necessary that th merchant enter content abstracts to the commerce server.

If the merchant selects the edit product button 64, he is presented in one embodiment with the screen shown in FIG 8. The merchant may specify an exact product to edit by completely specifying its SKU 81, in which case the commerce database is searched and the corresponding product summary data are displayed, an example of which is shown in FIG 9. Alternatively, he may include wildcard characters in the SKU and a list of matching products sold by that merchant will be displayed. For example, if * constitutes a wildcard symbol and the merchant specifies the SKU to be edited as 132*, the commerce server will search for all SKU's whose first three digits are 132. An SKU of 1??45 includes all SKU's whose first, fourth and fifth digits are 1, 4 and 5 respectively. Likewise, the merchant may request a listing by manufacturer, category or product name. In each of these cases, the e-commerce server searches for and presents a list of products. An example of such a list for all products manufactured by Scandia is shown in FIG 10.

As shown in FIG 10, the list is a summary presentation of the product name 101, product category 102, SKU 103 and the date on which the product information was entered into the commerce database. A highlight bar 105 that covers one product at a time may be moved up and down the list by movement arrows 106 and 107, respectively. The merchant selects an item to edit from the list by moving the highlight bar over the item and then selecting the S lect button 108. Wh n the merchant selects an item from the list to edit, a screen such as

that shown in FIG 9 is presented to the merchant. Alternatively, the merchant may expediently delete product data for the highlighted product from the commerce database by selecting the delete button 109. Thus, the merchant may add, edit and delete his product data summaries in the commerce database according to a simple and uniform interface.

A pseudo code embodiment of the process for changing merchant product data summaries in the commerce database in accordance with the present invention is as follows:

```
change_merchant_content_abstract()
{
     identify_merchant();
     authenticate_merchant();
     case(add_product)
          accept product_data
          {
               merchant  /*merchant identification*/
               SKU_number      /*product    identification
                               number*/
               category        /*product type*/
               manufacturer    /*product maker*/
               keyword         /*searchable keyword*/
               keyword         /*searchable keyword*/
               name            /*product name*/
               list_price      /*manufacturer's suggested
                               retail price*/
               weight
               size_range
               offer_price     /*price    offered    to
                               purchaser*/
               good_until      /*date offer expires*/
               time_stamp      /*time loaded by merchant*/
          }
     case(edit_product)
          case(identify_product_SKU);  /*identify
                                       product to be
                                       edited by
                                       completely
```

```
                                        specified    SKU
                                        number*/
            display product_data
            if(delete_product)
                 delete product_data
            else
                 accept product edits
                 store new product_data
            return

        case(identify_product_list);    /*identify
                                        product list by
                                        specifying   SKU
                                        with wildcard or
                                        manufacturer  or
                                        category*/

            display product_list
            accept product_selection    /*using highlight
                                        bar*/
            if(delete_product)
                 delete product_data
            else
                 accept product edits
                 store new product_data
            return

}
```

The present invention thus advantageously provides a convenient and efficient way for a merchant to shop over a network through simple and easy to understand interfaces. An embodiment of such an interface is shown in FIG 11. When a purchaser connects to the commerce server and is identified by providing a purchaser ID in field 111 and is authenticated by providing a purchaser password in field 112, the commerce server associates any subsequent transactions with the purchaser's customer profile data stored on the commerce database. In on embodiment, customer profile data includes the customer's name, billing address, shipping address and credit card

numbers with xpiration dates. In another embodiment, customer profile data also includes information derived from historical transaction data, such as buying patterns. In yet another embodiment, customer profile data includes demographic data, including income level and household information of the purchaser.

A purchaser may choose to view product and merchant information by predetermined category, such as home appliances 113, outdoor gear 114, or electronics 115. Alternatively, the purchaser may wish to carry out a search of the commerce database. Such a search may be boolean, e.g., HIKING AND (BOOTS OR SHOES). In another embodiment, the search is in a natural language format as is known in the art, e.g., I NEED HIKING BOOTS FOR BACKPACKING.

An embodiment of a screen responsive to such a natural language inquiry is shown in FIG 12. Here, the response is shown according to the names of merchants 121, 122, 123 and 124 who sell hiking boots. In another embodiment, the response is shown in accordance with hiking boots products listed in the commerce database. In the embodiment shown in FIG 12, tokens are displayed for each merchant indicating the types of payment accepted by the merchant 125 and the number of days in the merchant's money-back guarantee 126. This is merely meant to be exemplary of the types of information that could be supplied to the purchaser at this stage. Other types of information such as warranty information and service telephone numbers could also be included.

Upon selecting a merchant from the screen shown in FIG 12, the purchaser is referred by the commerce s rver

to the content server on which the selected merchant has placed his merchant content. In one embodiment in which the present invention is implemented on the Internet, the URL of the merchant is contained in a table in the commerce database that cross-references it to the merchant identifier in the product data structure. In another embodiment, the network address of the content server is included in the product data structure as an additional field.

Upon accessing the content server, the purchaser is presented with an electronic version of the merchant's store. Such stores are well known in the art as websites on the World Wide Web (WWW). The purchaser is able to search and browse among products offered by the merchant; learn detailed information regarding the merchant's return policy; learn about forms of payment accepted by the merchant; and order products. An example of a product screen at a content server is shown in FIG 13. The picture of the boot 131 may be animated, and the boot could be slowly turned so all sides may be viewed. Audio accompanies the picture, describing the advantageous features of the boot. This is supplemented with textual information 132, as well as information about the boot's available sizes 133, weight 134, suggested retail price 135, offer price 136, and offer expiration date 137. If the purchaser wants to select the boot for purchase, the purchaser selects the Buy This button 138 at the bottom of the screen.

Every screen of this embodiment of the content server also can have a Make Purchases button 139. The purchaser selects this button when he is ready to effectuate an

electronic transaction whereby the selected products ar purchas d.

When the purchaser has finished shopping and he selects the Make Purchases button 139, order information for his selected products is transmitted to the commerce server. In a preferred embodiment, this order information comprises the purchaser identification number, merchant identification number, SKU number, quantity, payment information, and special information (e.g., size, color) that may include attribute/value pairs. An embodiment of the data structure for such a purchase message from a content server to the commerce server is as follows:

```
purchase_order
{
     purchaser_id     /*purchaser identification number*/
     merchant_id      /*merchant identification number*/
     SKU              /*product identification number*/
     quantity         /*number of product ordered*/
     payment          /*credit or debit card selection*/
     special
          size
          color
     date_entered     /*When the order was sent*/
}
```

In this embodiment, the price of the selected product is derived from its merchant content abstract in the commerce database. In another embodiment, the price of the selected item is included in the purchase order from the merchant content server, and need not be derived from the commerce database.

Upon receiving the purchas r order message, the commerce server effectuates the transaction first by

retrieving the appropriat data from the commerce database. In one embodiment, this data includes custom r profile data including purchaser credit card numbers, billing and shipping addresses. It further includes merchant profile data including merchant account numbers and acceptable forms of payment data. It further includes product data information such as price information. In another embodiment, this information further includes product availability data, which is used in conjunction with an inventory control program of a kind well known in the art to obtain and ship a product in the most expedient and efficient manner possible from a plurality of available sources. For example, in one embodiment of the present invention, the commerce server database maintains information on the inventory levels for each merchant for each of his products. If a purchaser submits an order for a product of which a merchant is out of stock, the merchant may backorder the item or the purchaser may select another merchant.

The commerce server interacts with external payment systems (e.g., a bank) to cause purchaser's payment vehicle (such as a credit or debit card account) to be debited, and the merchant's account to be credited. In one embodiment, the merchant's bank account is directly credited with the appropriate amount. In another embodiment, the merchant's account with the commerce service is credited, and actual payment to the merchant's bank account is made at a later date in accordance with a predetermined commerce service policy.

A pseudo-code embodiment of the purchasing process in accordance with the present invention is as follows:

```
purchas _process();
{
     accept request              /commerce server accepts
                                 request for shopping page
                                 from purchaser*/
     display shopping_page       /*shopping page is
                                 displayed to purchaser*/
     accept purchaser_query      /*accept purchaser natural
                                 language query*/
     search commerce_database    /*commerce database is
                                 searched for products and
                                 merchants that match
                                 purchaser_query*/
     if(no match)
          display no_match
     else
          display matching_merchants
          {
               merchant_name          /*merchant name is
                                      selectable with
                                      underlying network
                                      address pointing to
                                      merchant content
                                      server*/
               merchant_network_address
               payment_accepted       /*tokens indicating
                                      credit and/or debit
                                      cards accepted*/
               return_policy          /*token indicating
                                      days to return for
                                      refund*/
               merchant_blurb         /*brief textual blurb
                                      about merchant*/
          }
     return
     accept merchant_selection       /*merchant selected by
                                     purchaser*/
     refer purchaser to
     merchant content server         /*at network address
                                     for content server for
                                     s lected merchant*/
     accept purchase_order from purchaser
          {
               purchaser_id   /*purchaser identification
```

```
                                    number*/
                merchant_id         / merchant   identification
                                    number*/
                SKU                 /*product    identification
                                    number*/
                quantity            /*number     of     product
                                    ordered*/
                payment             /*credit or debit card
                                    selection*/
                special_selection_data
                     size
                     color
                date_entered       /*When the order was sent*/
           }
      search database for purchaser_profile
           {
                purchaser_id
                payment_data_1
                     credit_card_type
                     credit_card_number
                     expiration_date
                payment_data_2
                     credit_card_type
                     credit_card_number
                     expiration_date
                billing_address
                shipping_address
                date_entered            /*this filed is used
                                        as a flag in updating
                                        or eliminating old
                                        information*/
           }
      search database for merchant_profile
           {
                merchant_id
                merchant_account_number
           }
      effectuate payment            /*payment type selected by
                                    purchaser is debited*/
      initiate order fulfillment    /*an electronic
                                    message is formatted
                                    and sent to the
                                    appropriate order
                                    fulfillment agent,
                                    instructing the agent
                                    which products to ship
```

```
                                    to the purchaser*/
}
```

The present invention also advantageously provides the purchaser and merchant with the ability to generate various reports based upon historical transaction data stored on the commerce database. A merchant generates a report by selecting the report button 65 on the screen shown in FIG 6. In one embodiment, a merchant report lists all sales of merchant's products through the service on a monthly, weekly or daily basis selectable by the merchant. In another embodiment, a report shows summary dollar amounts generated by sales by categories specified by the merchant. In yet another embodiment, a report presents the results of customer satisfaction surveys in formats readily and advantageously selectable by the merchant (e.g., by product purchased, time period, or by selected demographic features of the purchaser).

A purchaser generates a report by selecting the report button 118 shown in FIG 11. In one embodiment, a report shows all purchases made by the purchaser through the service over the past five, ten or thirty days, or since the beginning of the present calendar year. In another embodiment, a report shows a breakdown of dollar amounts purchased under each form of payment authorized by the purchaser since the beginning of the present calendar year.

The reporting feature of the present invention advantageously provides both merchants and purchasers with the ability to track and assess the utility and efficiency of the service. It also assists the merchant and purchaser to control budgets and track cash flow.

Separating m rchant content from transaction functionality on an el ctronic commerce system in accordance with the present invention represents a sensible and efficient allocation of resources in promoting commerce over a network. It allows the transaction service provider to concentrate his resources on providing the most up-to-date and efficient set of services for effectuating buying and selling transactions between networked parties. Likewise, the merchant is freed form the burden of maintaining transaction functionality, and concentrates on his area of expertise, merchant content and product information. The present invention thus provides a more effective and efficient way of carrying out electronic commerce.

What is claimed is:

1. An electronic commerce server system for carrying out distributed electronic commerce using a network with merchant content servers and purchasers, comprising an electronic commerce server connected to the network and an electronic commerce database connected to said electronic commerce server, said commerce server associating merchant content stored on said database with merchant content stored on a merchant content server.

2. The system of claim 1, wherein the merchant content stored on said electronic commerce database is a merchant content abstract summarizing the associated merchant content stored on said merchant content server.

3. The system of claim 2, wherein said merchant content abstract comprises:

a. merchant identification data;

b. product identification data; and

c. product price data.

4. The system of claim 2, wherein said merchant content abstract comprises an attribute/value pair.

5. The system of claim 2, wherein said merchant content abstract comprises:

d. a time stamp indicating the time said merchant content abstract was stored on said database; and

e. a product keyword.

6. The system of claim 3, wherein said merchant content abstract further comprises product weight data useful in determining the cost of shipping a product.

7. The system of claim 1, wherein said database stores merchant profile data.

8. The system of claim 1, wherein said database stores purchaser profile data.

9. The system of claim 1, wherein said database stores historical transaction data.

10. A method for coordinating a plurality of parties including a merchant and a purchaser to effectuate an electronic commerce transaction using a network, comprising the steps of:

a. storing a merchant content abstract;

b. receiving a request for merchant content information;

c. searching a database for merchant content information responsive to said request;

d. presenting the results of said search;

e. providing a reference to a merchant content server connected to the network;

f. receiving a purchase request having a selected product; and

g. initiating an electronic transaction for said

s lected product.

11. The method of claim 10, wherein the merchant content abstract is received from a merchant.

12. The method of claim 10, wherein the merchant content abstract is generated automatically by the electronic commerce server using the results of an electronic search of the merchant content server.

13. The method of claim 10, wherein storing a merchant content abstract comprises the steps of:

a. storing product identification data;

b. storing merchant identification data; and

c. storing product price data.

14. The method of claim 10, wherein storing a merchant content abstract further comprises the step of storing a time stamp designating the time at which said merchant content abstract is stored in the database.

15. The method of claim 10, wherein the step of initiating an electronic transaction comprises the steps of:

a. receiving payment vehicle selection data;

b. directing that the selected payment vehicle be debited to the sum of the net cost of the selected product;

c. directing that a merchant account be credited for the sale of the selected product; and

d. directing the delivery of the s lected product to

its purchaser.

16. The method of claim 15, further comprising the step of storing a record of the electronic transaction in a database.

17. The method of claim 15, wherein the step of receiving payment vehicle selection data comprises the step of retrieving preregistered payment vehicle information from a database.

18. The method of claim 15, wherein the step of receiving payment vehicle selection data comprises the steps of accessing a purchaser profile and:

a. retrieving purchaser credit card identification data;

b. retrieving a purchaser credit card number; and

c. retrieving a purchaser credit card expiration date.

19. The method of claim 15, further comprising the step of storing transaction data in the database.

20. The method of claim 10, further comprising the step of generating a transaction report.

21. The method of claim 20, wherein the transaction report is generated for a merchant.

22. The method of claim 20, wherein the transaction report

is generated for a purchaser.

23. An electronic commerce server system for carrying out electronic commerce between purchasers and merchants over a network comprising:

a. computer readable storage media for storing a merchant content abstract;

b. means for receiving a request for merchant content information;

c. a computer for searching said computer readable storage media for merchant content information responsive to said request;

d. means for presenting the results of said search;

e. means for providing a reference to a merchant content server connected to the network;

f. means for receiving a purchase request having a selected product; and

g. means for initiating an electronic transaction for said selected product.

24. The system of claim 23, further comprising means for generating a transaction report.

FIG. 1
(PRIOR ART)

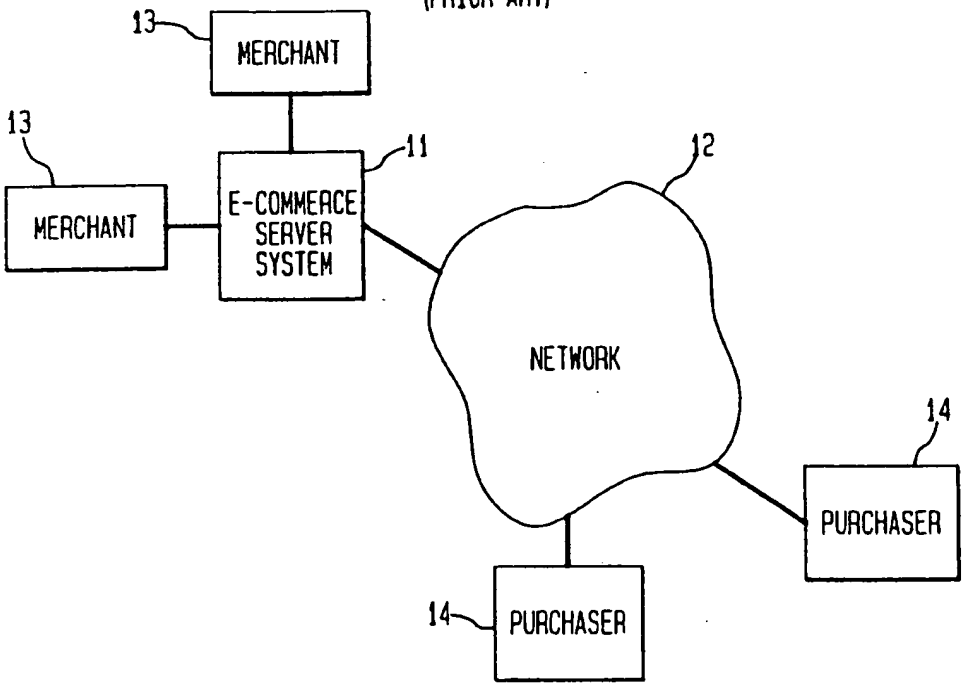


FIG. 2

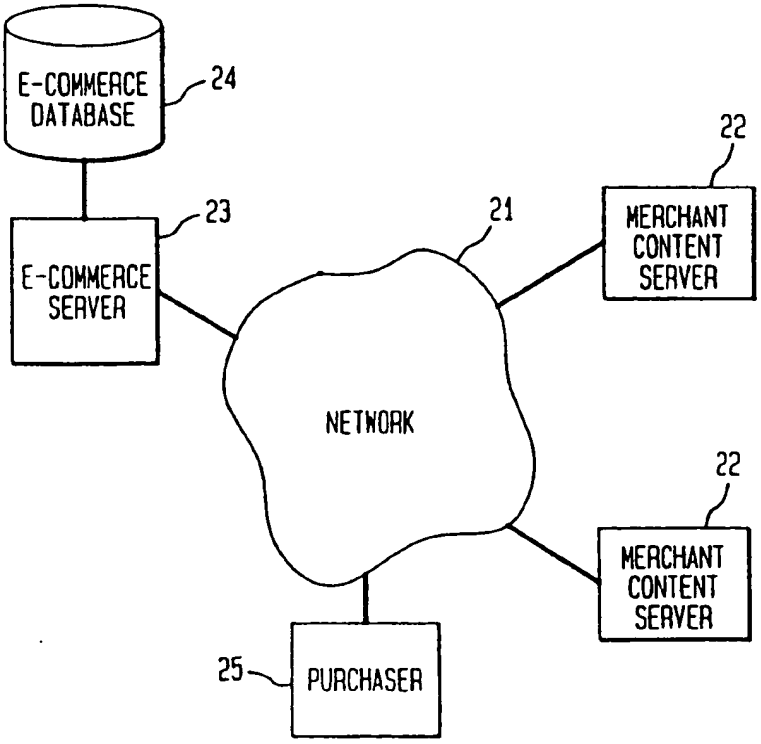


FIG. 3

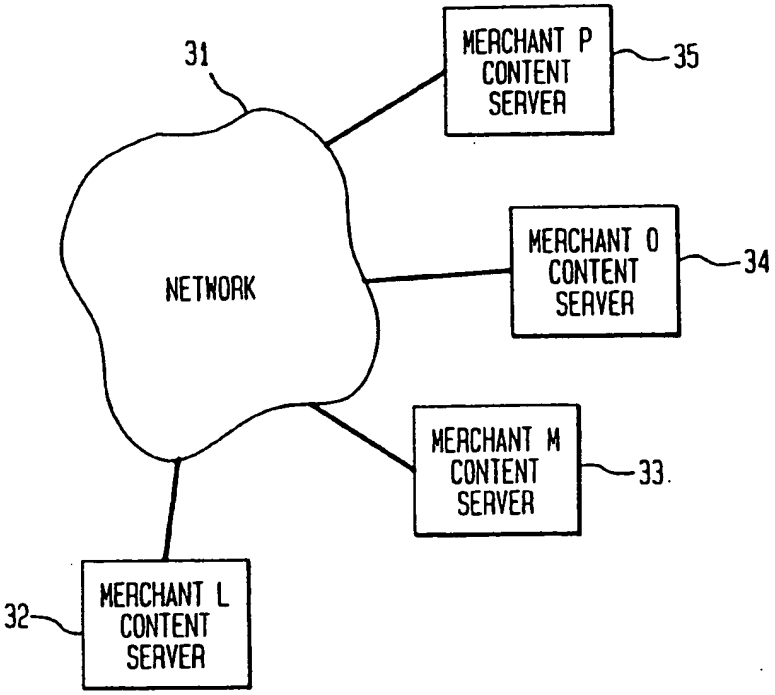

31
NETWORK
MERCHANT P CONTENT SERVER
35
MERCHANT O CONTENT SERVER
34
MERCHANT M CONTENT SERVER
33
MERCHANT L CONTENT SERVER
32

FIG. 4

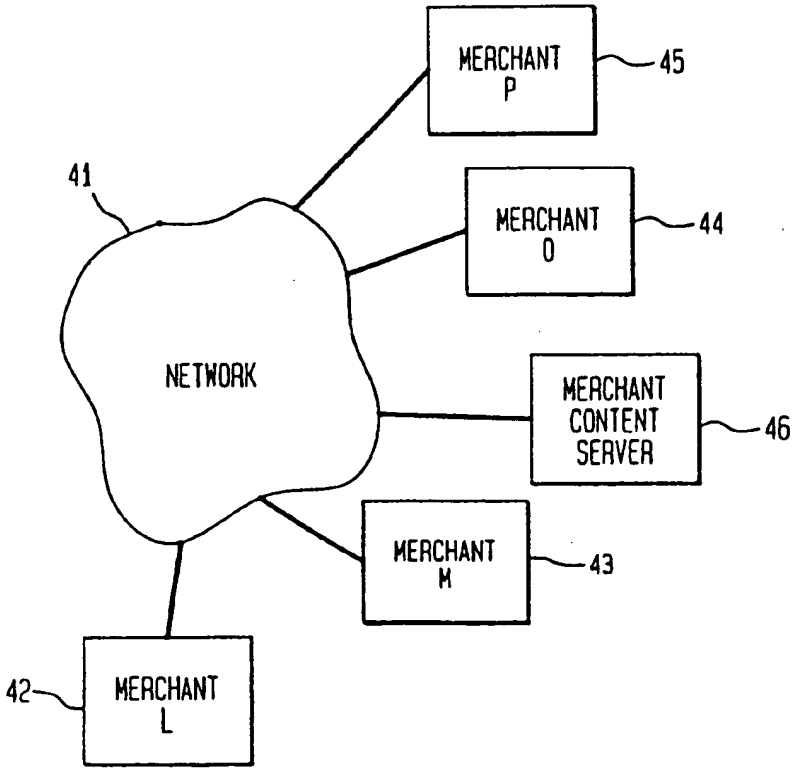

41
NETWORK
MERCHANT P
45
MERCHANT O
44
MERCHANT CONTENT SERVER
46
MERCHANT M
43
MERCHANT L
42

FIG. 5

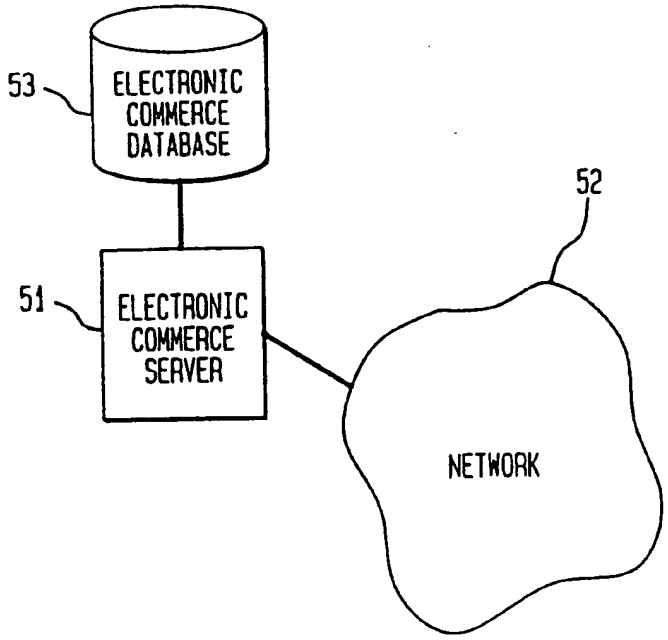

53
ELECTRONIC COMMERCE DATABASE
52
51
ELECTRONIC COMMERCE SERVER
NETWORK

FIG. 6

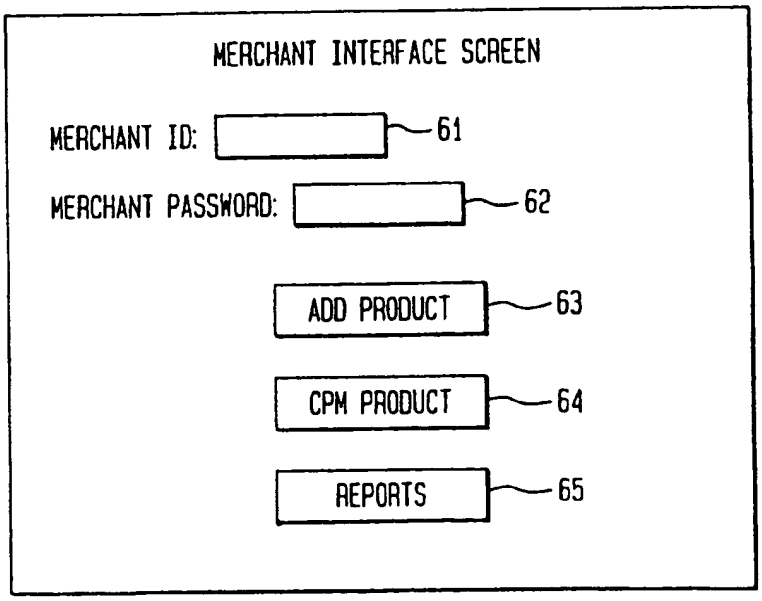

MERCHANT INTERFACE SCREEN
MERCHANT ID:
61
MERCHANT PASSWORD:
62
ADD PRODUCT
63
CPM PRODUCT
64
REPORTS
65

FIG. 7

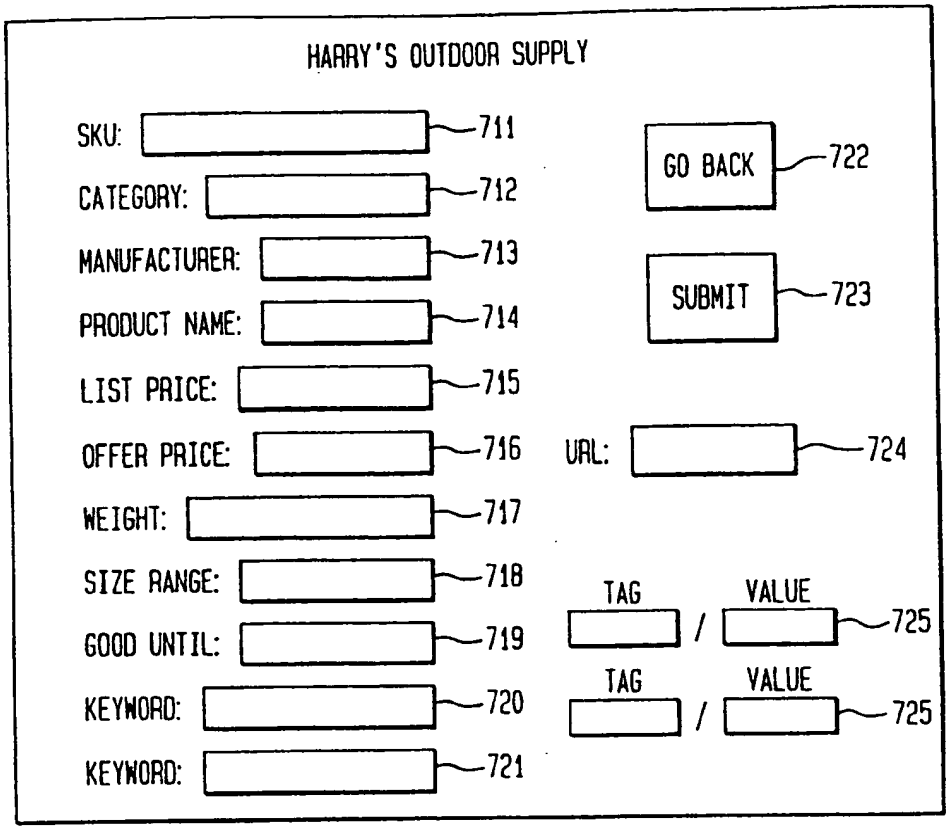

HARRY'S OUTDOOR SUPPLY
SKU:
711
CATEGORY:
712
MANUFACTURER:
713
PRODUCT NAME:
714
LIST PRICE:
715
OFFER PRICE:
716
WEIGHT:
717
SIZE RANGE:
718
GOOD UNTIL:
719
KEYWORD:
720
KEYWORD:
721
GO BACK
722
SUBMIT
723
URL:
724
TAG
VALUE
725
TAG
VALUE
725

FIG. 8

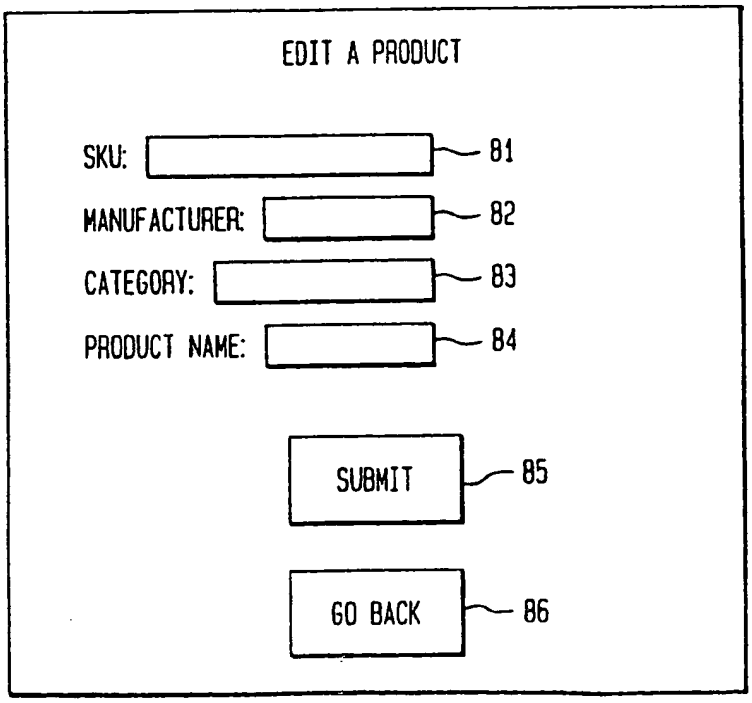

EDIT A PRODUCT
SKU:
81
MANUFACTURER:
82
CATEGORY:
83
PRODUCT NAME:
84
SUBMIT
85
GO BACK
86

FIG. 9

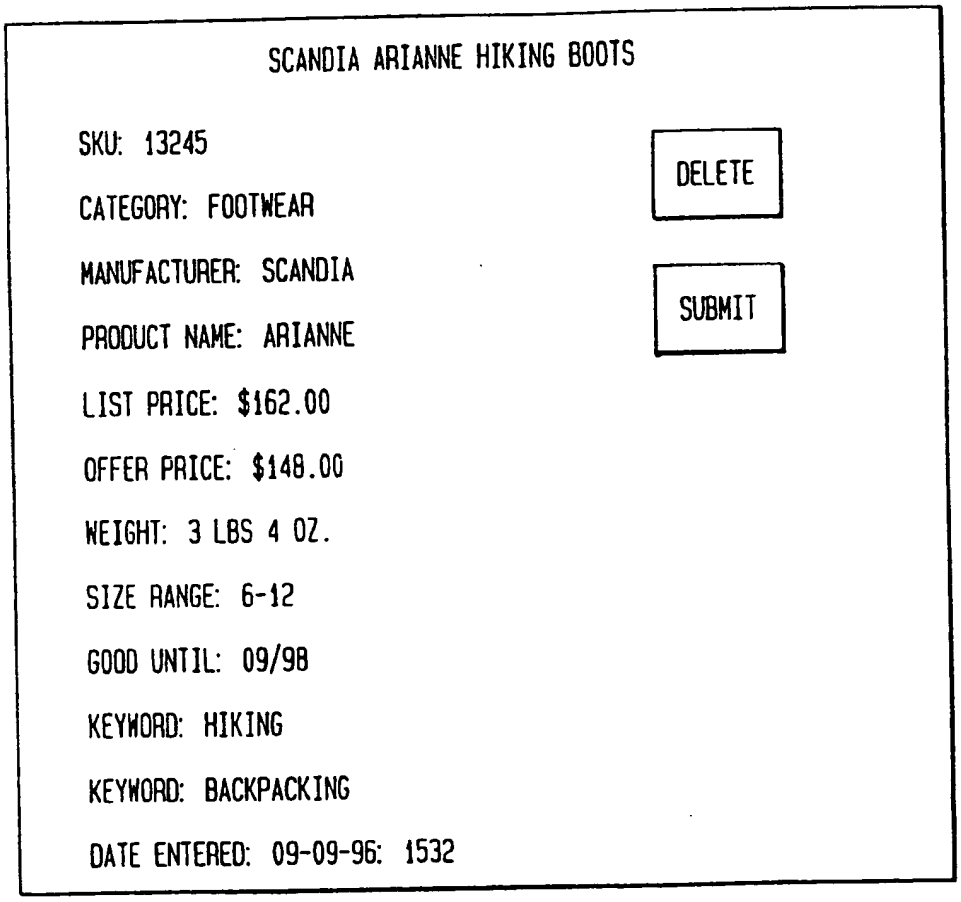

SCANDIA ARIANNE HIKING BOOTS
SKU: 13245
CATEGORY: FOOTWEAR
MANUFACTURER: SCANDIA
PRODUCT NAME: ARIANNE
LIST PRICE: $162.00
OFFER PRICE: $148.00
WEIGHT: 3 LBS 4 OZ.
SIZE RANGE: 6-12
GOOD UNTIL: 09/98
KEYWORD: HIKING
KEYWORD: BACKPACKING
DATE ENTERED: 09-09-96: 1532
DELETE
SUBMIT

FIG. 11

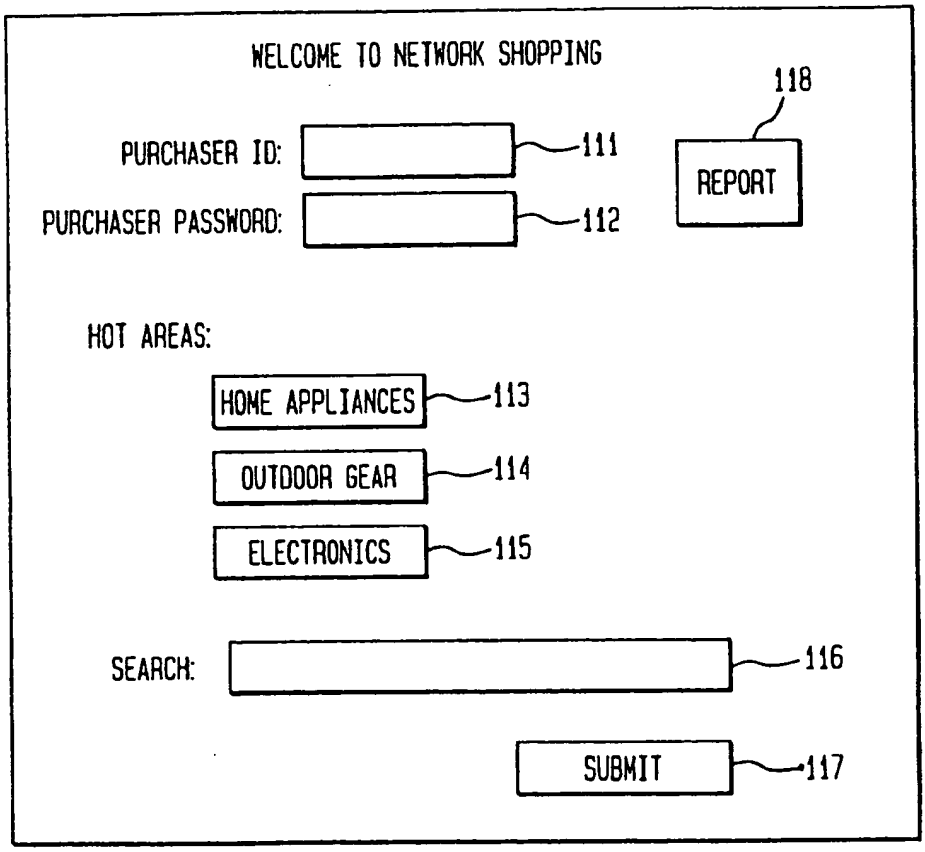
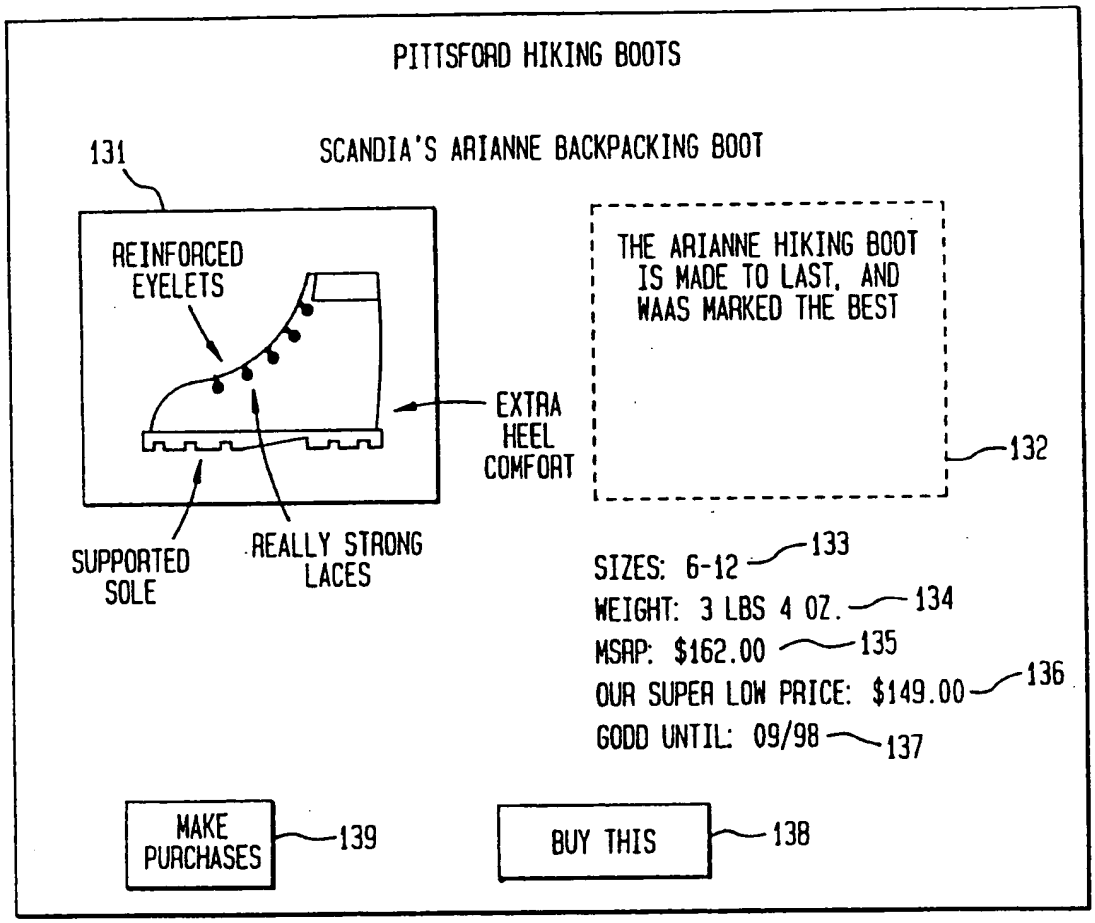

WELCOME TO NETWORK SHOPPING
118
PURCHASER ID:
111
REPORT
PURCHASER PASSWORD:
112
HOT AREAS:
HOME APPLIANCES
113
OUTDOOR GEAR
114
ELECTRONICS
115
SEARCH:
116
SUBMIT
117

FIG. 13


PITTSFORD HIKING BOOTS
131
SCANDIA'S ARIANNE BACKPACKING BOOT
REINFORCED EYELETS
EXTRA HEEL COMFORT
SUPPORTED SOLE
REALLY STRONG LACES
THE ARIANNE HIKING BOOT IS MADE TO LAST, AND WAAS MARKED THE BEST
132
SIZES: 6-12
133
WEIGHT: 3 LBS 4 OZ.
134
MSRP: $162.00
135
OUR SUPER LOW PRICE: $149.00
136
GOOD UNTIL: 09/98
137
MAKE PURCHASES
139
BUY THIS
138